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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,074	02/02/2004	Jennifer Hay	M93.12-0296	9839
27367	7590	07/25/2005		
WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			EXAMINER LE, TOAN M	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/770,074

Applicant(s)

HAY, JENNIFER

Examiner

Toan M. Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 20-22, 24, 39, 48 and 50 is/are rejected.
- 7) ☒ Claim(s) 6-19, 23, 25-38, 40-47 and 49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/12/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 20-22, 24, 39, 48, and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by “Progress in Determination of the Area Function of Indenters Used for Nanoindentation”, Herrmann et al. (referred hereafter Herrmann et al.).

Referring to claims 1 and 48, Herrmann et al. disclose a testing system and a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data comprising the steps of:

generating values associated with received measurements, the values indicative of multiples of a standard deviation (page 397, from 1<sup>st</sup> col. to 2<sup>nd</sup> col., section 3.1: 1<sup>st</sup>, 2<sup>nd</sup>, 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> paragraphs; equations 8-11; figures 2-3); and

calculating the significant event as a function of the values (page 397, from 1<sup>st</sup> col. to 2<sup>nd</sup> col., section 3.1: 1<sup>st</sup>, 2<sup>nd</sup>, 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> paragraphs; equations 8-11; figures 2-3).

As to claim 2, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, wherein the significant event is a point of engagement (page 397, section 3.1, 2<sup>nd</sup> col., 6<sup>th</sup> and 7<sup>th</sup> paragraphs; figures 2-3).

Referring to claim 3, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, wherein the point of engagement is of an indenter in an indenter test system (figures 4-5).

As to claim 4, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, wherein the point of engagement is of a tensile test system (page 396, 1<sup>st</sup> col., section 2.2: 1<sup>st</sup> and 3<sup>rd</sup> paragraphs).

Referring to claim 5, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, wherein the received measurements are received as a function of at least one variable, and further comprising processing the received measurements to generate the values (page 397, section 3.1, 2<sup>nd</sup> col., 6<sup>th</sup> and 7<sup>th</sup> paragraphs; equation 8-11).

As to claim 20, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in data measurements comprising the steps of:

- receiving a data series indicative of test measurements as a function of a first variable;
- generating at least one processed series from the data series (page 396, entire section 2.2);
- identifying a first point on the at least one processed series; identifying a second point on the at least one processed series;
- calculating the significant event as a function of at least one of the first point and the second point (page 396, entire section 2.2).

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Referring to claim 21, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, and further comprising receiving the data series as a function of at least one other variable (page 396, equation 1:  $h$  = depth is a variable of load  $P$ ).

As to claim 22, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, wherein the test measurements indicate force (equation 1: load  $P$ ).

Referring to claim 24, Herrmann et al. disclose a computer readable medium including instructions readable by a computer, which when implemented, cause the computer to detect a significant event in measurement data, wherein generating at least one processed series comprises taking a first derivative of the received data series to generate a first processed series (page 396, equation 2).

As to claim 39, Herrmann et al. disclose a method of determining a significant event in experimental data comprising the steps of:

generating a data signal indicative of measurements as a function of at least one variable (page 396, entire section 2.2);

processing the data signal to generate a plurality of processed signals (page 396, entire section 2.2); and

determining a significant event based on the processed data signals (page 396, entire section 2.2).

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Referring to claim 50, Herrmann et al. disclose a testing system recording measurements and capable of determining a significant event comprising:

a testing apparatus generating a data signal indicative of the measurements recorded as a function of at least one variable (contact depth  $h$  in equation 8); and

a processor coupled to the test apparatus and a computer readable medium storing processor-executable instructions for identifying the significant event, the instructions comprising steps of:

receiving the data signal; and

generating from the received data signal at least one processed signal indicative of a multiple of a standard deviation (page 397, from 1<sup>st</sup> col. to 2<sup>nd</sup> col., section 3.1: 1<sup>st</sup>, 2<sup>nd</sup>, 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> paragraphs; equations 8-11; figures 2-3).

#### *Allowable Subject Matter*

Claims 6-19, 23, 25-38, 40-47, and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of the claims 6-19, 40-47, and 49 is the inclusion of the step of differentiating the received measurements to generate a derivative signal scattering about zero as a compensation function, integrating the derivative signal, and dividing the integrating signal by the standard deviation for an upper/lower bounds based on the generated values to identify the significant events like points of engagement of the indenter testing system.

The reason for allowance of the claims 23 and 25-38 is the inclusion of the first variable comprising displacement and time and taking a second derivative/integration of the received data

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series together with standard deviation to generate a second/third/fourth processed series for an upper/lower threshold in identifying the significant events like points of engagement of the indenter testing system.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toan Le

July 14, 2005

  
MICHAEL NGHIEM  
PRIMARY EXAMINER